

Official
Newsletter
of the
Fort Vancouver
Trades Guild

THE forge & plane

VOLUME VI, NUMBER 2

SPRING 2006

NWBA Spring Conference

THE SPRING CONFERENCE OF the Northwest Blacksmith Association took place April 21–23, 2006, at the Evergreen State Fairgrounds in Monroe, Washington. Well over two hundred people attended the three-day event. Demonstrators included Wendell Broussard, from Texas, and Doug Wilson, from Deer Isle, Maine. Fort Vancouver Trades Guild members who took advantage of the opportunity to learn and socialize with other blacksmiths included Dean Moxley, Jeff Wilson, Ken Mermelstein, Bob Race, and Ralph Hinds. ♦



Photos: S. and M. Gawrecki

Doug Wilson transfers a paper design to a steel plate at NWBA



Left to right above: Guild members Bob Race, Susan Gawrecki, Dean Moxley, and Ralph Hinds at NWBA



NWBA Conference dinner and general meeting



Gary Lewis in the forge (S. Gawrecki)

Gary Lewis to Coordinate Off-site Events

GARY LEWIS, who has been a smith at Fort Vancouver for just over a year, has volunteered to help coordinate off-site events for the Guild. He has shared the following information about upcoming summer and fall off-site demonstrations and requests anyone

who knows of additional events that would be enhanced by live blacksmithing to please contact him (artillerymonger@msn.com or phone 503-256-0338). Gary has recently sent an email to all Fort blacksmiths. If you did not receive it, let him or any Guild officer know, so they can update your contact information.

Off Site Demonstrations: Information To Date

Champoeg State Park
July 15 and September 2, 2006
(program themes to come)

B.E.A.T. Equestrian School for Challenged Children
Banks, Oregon
July 2006

Pacific University Corn Roast
September 2006

Please let Gary know if you are willing to volunteer for any of these demonstrations. Along with his thanks, he sends wishes that the peen marks on your forehead be few! ♦

Ice on the slack tubs!

ON FEBRUARY 18, a day so cold there was ice on the slack tubs, Guild members Jeff Botts and Gary Lewis (*right*) worked on a door pull for the sawmill at Antique Powerland, in Brooks, Oregon. Fortunately, their enthusiasm for the project was enough to warm up the shop. Gary Strausbaugh has been trying open the shop at Brooks once a month for Open Forge.

Antique Powerland has scheduled the annual Great Oregon Steam Up for July 29–30 and August 5–6, 2006. (Chances are good that the weather for this will be, well, steamy.) There will be a request for volunteers to demonstrate black-



(S. Gawrecki)

smithing during the event. Please call Gary Strausbaugh (503) 378-0926, cracked.anvil.forge@gmail.com. or Gary Lewis (503) 256-0338 artillerymonger@msn.com. ♦

Volunteer Appreciation Day



Guests, spouses, and children could visit the exhibits at Pearson at no charge, and everyone had the chance to view a slide show presentation of special events at the Fort. Lucky Guild members Susan Gawecki and Sanjay Sachdev won door prizes, and Garron Guest, volunteer blacksmith, led other volunteers in spirited supporting applause. ♦

Appreciative volunteers line up for goodies at Pearson Museum
(Photos: Gawecki)

FORT VANCOUVER NATIONAL Historic Site hosted its annual Volunteer Appreciation Day at the Pearson Air Museum on March 19. Historic Site Superintendent Tracy Fortmann welcomed the group. Volunteers from both the McLoughlin House and the Fort were recognized with special awards for their efforts.



Left to right:
Greg Shine,
Chief Ranger;
Kimm Fox-
Middleton,
Volunteer
and Special
Events
Program
Manager;
Tessa
Langford,
Curator

Peter Ross Workshop Decorative Iron in the 18th Century English Style

Friday through Sunday
August 11–13, 2006
Meridian Forge
36914 Meridian East,
Eatonville, WA 98328
(360) 832-6280

Details and registration information:
Ike Bay (503) 645-2790,
dasbayhaus@worldnet.att.net

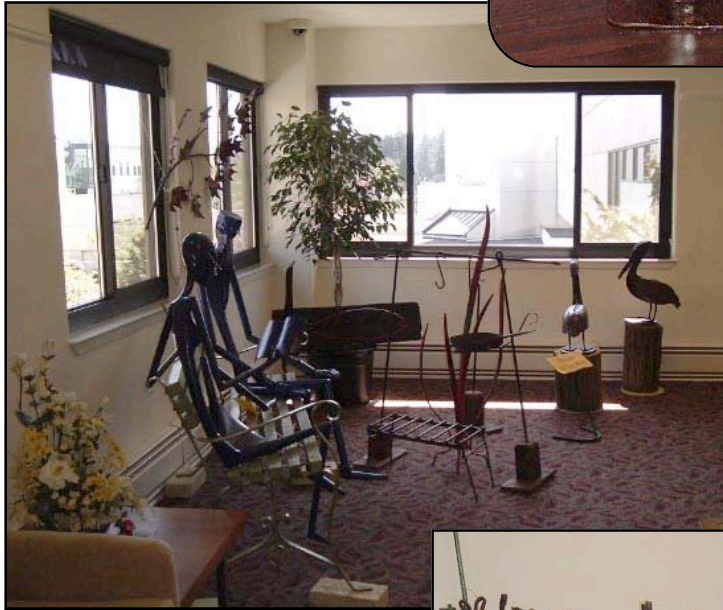


Prizewinners and planes

Adventures in Metal: Exhibit of Works by Paul Hinds

ADVENTURES IN METAL, an exhibit of sculpture by Paul Hinds, at the Willamette View Campus, in Willamette, Oregon, closed May 14 after being viewed by more than a hundred people. The exhibit, which displayed functional objects and static as well as kinetic sculpture, was humorous, witty, and terse, like Paul himself. For example, the kinetic sculpture *Politics* moves for hours, unless someone intervenes, before it comes to a stop. Another ingenious kinetic sculpture of an airplane displays a small sign, *Wrong Brothers and the Age of Fright*.

Many of us are familiar with Paul's garden sculpture, but this exhibit gave us the chance to see some of his smaller pieces. Mark Hinds, Paul's son, installed the sculpture, and the exhibit was thoughtfully planned and well executed. It even included some of Paul's tools, which allowed lay people to visualize how the craftsman might have created the works on display in a real shop, with real tools. ♦



How to Work Hot Material

Using Punches, Drifts or Slitters

Bob Race

HAVING PROBLEMS WITH your punching skills? Because of a recent remark someone made at a blacksmiths' meeting about centering a hole, it appeared that something on the technique of punching and slitting without losing accuracy might be helpful. This material is primarily aimed at those who work using only hand tools, forge, and anvil. It is hoped that it will help cut down on the total amount of work and make your end result look more pleasing.

Introduction

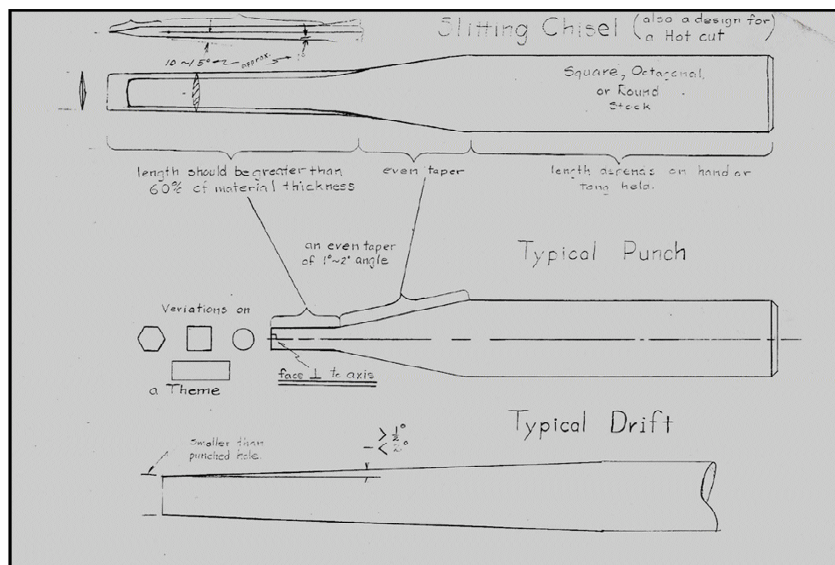
VARIOUS PUNCHES, chisels, and drifts are needed for a well-equipped shop. Their sizes and shapes are as different as their uses, and over the years, a blacksmith will probably accumulate more of these than any other type of tool in the shop. This article is directed toward beginners, but it may also give some different insights to those of you who believe that punching is an arduous and tedious task, on the order of threading a needle while wearing a pair of welder's gloves. Like all blacksmithing applications, it takes practice to do what looks intentional rather than something that 'somehow managed to fit.'

Styles of Punches, Drifts, and Slitters

PUNCHES AND CHISELS are available through catalogs and tool stores. Many are reliable and well made, and should last for years with proper care. Because they have a simple form, they are easy to make, and many are interchangeable, so one tool can serve several different needs.

Punches are used chiefly for making holes in material — anything from paper, to cloth, to metals (even cookie dough). They can penetrate thick or thin, hot or cold; and holes can be round, square, oblong, or any weird shape imaginable — keyholes, for example.

Drifts are used primarily to bring the hole to an exact size or to help align holes in two or more different plates. Drifts generally have a long, slim taper and may come in sets.



Do not hesitate to put the piece back in the fire when it gets down to an orange or, safer still, a dull yellow.

Slitters are simple chisels, whose main purpose is to pierce the material with the least possible distortion or loss of material. The sides and end are sharpened to act as a piercing unit. They are slim in cross-section, and need to be less than the length of the slit they are cutting.

Materials

THE BEST MATERIAL for making punches remains tough and hard even when approaching a red heat. Both the *S* and the *H* series of steel fit this category, but they are expensive, and their specified temperature range when being forged is between 1650° and 2000° Fahrenheit. The material then must be stress-relieved by heating it to 1200° and holding it at that temperature for at least one hour. Your best bet for good punch material is to look for it in used jackhammer bits, pry bars, or similar tools that you can recycle.

Spring stock (old coil springs, hayrakes, roto-tiller tines, railroad clips, etc.) is a common alternative to premium quality stock. Punches made from spring stock work well as long as the stock being punched is mild steel and is at a temperature above 1500°. When using spring stock tools for punching or slitting, cool the tip frequently to avoid upsetting the tool in the stock.

Do not let the tool material get too cold as you are shaping it, which can cause stress cracks. To avoid or minimize stress cracks, you must use extreme care when straightening out any recycled material (like coil spring, etc.). *Do not hesitate to put the piece back in the fire when it gets down to an orange or, safer still, a dull yellow.* If the cracks are shallow, try grinding them out and starting over. If they are deep or cross-sectional, cut that part out and try to salvage what you can.

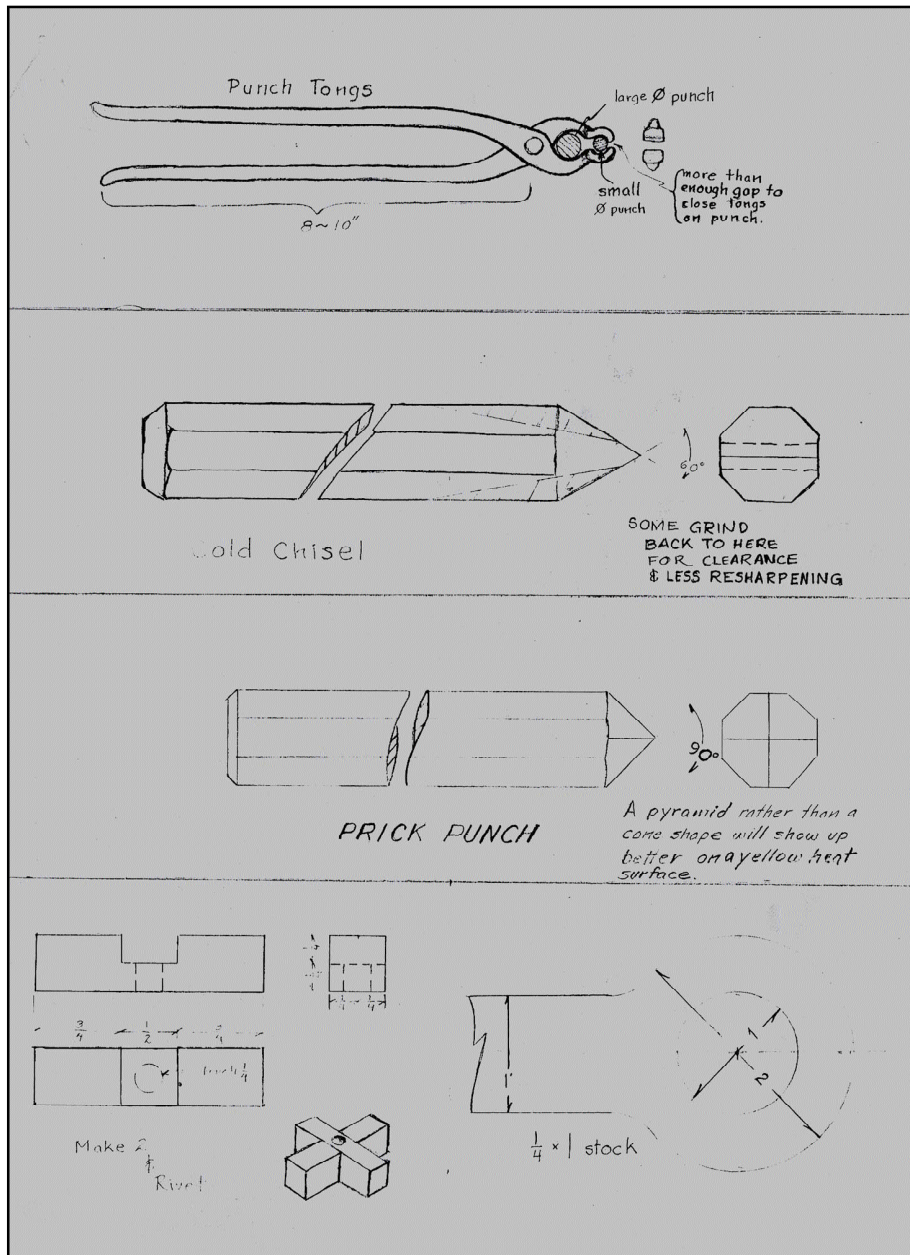
Making These Tools

THE BASIC DESIGN of a punch is a face perpendicular to the axis of the shaft, with only the slightest of tapers from the face to the cone section, and from there, an even taper to the body. The face edges should be sharp and crisp, not rounded or chipped. For working thicker material, it is best to have the punch's sides above the face with the slightest of taper, to allow faster penetration while still pushing the material aside so it doesn't stick in the hole. (What may happen here is that the punch itself will absorb heat from the material being worked and the tip will soften and swell with each blow, creating a self-made rivet.) Spring-tool material works fine for punching thin stock. On heavier stock, quench the tool often.

Hot Punching

HOT-PUNCHING is piercing a hole, or slit, through steel at high temperature. If you need to locate the hole in an exact spot, take the time to mark the exact location with a prick punch. Hammer eyes and mortices are critical: you need to have them aligned in two axes so they should be marked on both top and bottom of the work piece.

If you are striving for accurate work, then every center must be located as close as possible to its desired location. Start with the squarest of stock, each corner as close as possible to 90 degrees.



Working with care, you can position a hole almost as precisely as a drill press. It takes practice, but if you start now and never let up, it will eventually become second nature.

Carefully scribe two diagonals on the face to locate the position of the hole. Carefully take a prick punch and just tap a small divot in the intersection. Inspect this mark to make sure it is in the exact center of the cross. Now go back and (more by feel than sight) move the punch so that it is centered exactly in the divot. Holding the prick punch firmly in the divot so that it is as nearly perpendicular as possible, give the punch a smart rap with the hammer. Once the piece is properly marked, heat it up to a near-white heat, bring it to the anvil, place the proper-sized punch over the

mark, and give a firm tap on the first blow. Check quickly to make sure that your punch is centered on the pin prick. If it is, continue punching with heavy blows until the punch feels like it cannot go any further. Take the punch out, turn the piece over, and cool the punch in water. On the opposite side locate your prick mark, center your punch, and repeat the process. You should be able to feel the punch pass through to the other side. Slide the piece with the punch still in

Note: We apologize for the quality of the illustrations in this article. Anyone who needs to use these as working drawings should contact the editor about obtaining better copies. —Ed.

One final observation born of experience: if something is not right, lay your piece and hammer down, walk around the anvil and an idea may come to you. If not, stop and take a little more time to study the situation. It's better than taking the wrong ramp off the freeway.

the hole over the pritchel hole and give it a smart rap with the hammer. The slug should fall out. (Do not hesitate to put the piece back in the fire should it get down below an orange heat.)

After you have punched the hole, you can bring it out to an exact size with a drift. Ideally, the punch you used was just slightly smaller than the final hole. To make the hole an exact size when you are working thin stock, choose a long tapered drift that will comfortably enter the hole. Position the piece over a bolster that is slightly larger than the finished hole. Place the drift in the hole and give it a smart blow. Turn the piece over and repeat the process. Do this in black heat or cooler.

Working with thicker material, heat the piece up to a good yellow heat and enlarge the hole to the desired size. If you are concerned about the exterior edges of the piece, leave the drift in the hole, (it should be snug), place the piece on edge on the face of the anvil, and straighten the sides. (This process can be done in a dull red or even a black heat.) Repeat the process until the hole and sides match the needed finished dimensions.

Tip: Putting coal dust or graphite in deeper holes once they are started helps keep the punch from sticking. Out of curiosity, people have also tried sawdust, a few drops of oil, and a piece of cotton cloth. According to the experts, just creating some gas at the bottom of the hole seems to help.

Slitting

THE PRIMARY PURPOSE of slitting is to make a hole with very little loss of material. Tools such as hammers, sewing needles, pickaxes, etc., generally have a central eye in a meaty clump of steel. Sometimes a rod also needs to have a hole at its end, with a diameter larger than that of the rod stock. And, with homogeneous steel, it is sometimes more convenient to slit a few inches near the end of the rod than it is to weld an eye in the end. To figure the length of this slit, take the diameter of the hole, plus the width of the stock it is piercing and multiply by π . This will be the length of the slit that you need to pierce in the stock.

Mark both sides carefully with the prick punch. (If aesthetics are important, mark where the center of the hole will be, and make the total length of the line about $\frac{1}{4}$ inch shorter. This will allow you to remove the scars at the ends of the slit.) Bring that section of the material up to a bright-yellow heat and slit in just over halfway from one side. Repeat this process from the opposite side so that each side of the bar is equal. Close the slit and straighten the bar. Bring the slitted section to an orange heat and clamp the solid area horizontally in the vise. Now, carefully tap the end so that both sides of the slit spread out evenly until the hole is big enough to slip over the horn or cone mandrel. This will allow you to size up the ring.

One final observation born of experience: if something is not right, lay your piece and hammer down, walk around the anvil and an idea may come to you. If not, stop and take a little more time to study the situation. It's better than taking the wrong ramp off the freeway.
HAPPY POUNDING! ♦

News from the Fort

MY THANKS TO THE MONDAY and Friday crews for helping with the school kids' hands-on programs so far this spring. They have been a great success and the kids really enjoy the time spent in the shop.

The park has new telephone numbers and everyone has an individual number instead of an extension. My new number is 360-816-6247. The general fort number is 816-6240 and the general park number is 816-6230.

The library has officially reopened for use. It is now in the curatorial department. It is scheduled to be open Monday through Friday from 9:00 AM until 4:00 PM. It is better to call ahead to make sure a staff member will be around to let you in. Try calling 816-6250. Check-out policy is still the same and all persons who were previously approved have been "grandfathered" over to the new system. We will be developing a resource room in the ITS office with frequently requested titles. These will include titles on the various trades and general fort history. More on that in the future.

Thanks for all your hard work and I'll see you at the Fort. ♦ — Bill

Bill DeBerry, Historic Programs Coordinator

Note from the Treasurer

THE FORT VANCOUVER TRADES GUILD has funds available to be used for educational purposes. If you would like to apply for a Guild-sponsored scholarship please contact Ted Anderson at 360-696-2648 or nilst1@mac.com for further details. ♦

Annual Meeting

THE FORT VANCOUVER TRADES GUILD will hold its 2006 annual meeting and election of officers and new members on Saturday, June 10, at 10:00 AM in the conference room above the Indian Trade Shop. For information, contact any Guild officer. ♦

Notes from the President

TO ALL GUILD MEMBERS — What a wonderful Spring we are having. This means that summer and our annual meeting are both getting closer. The annual meeting will be held June 10, at 10:00 AM, in the conference room above the Indian Trade Shop. Please consider standing for a board position. We have several board members who will continue but who are also very willing to step aside for others to have a chance.

You don't need to commit a great deal of time to serve on the board. We have one annual membership meeting, at which we elect new board members and officers. In addition, there may be several working meetings throughout the year plus some decision making by email and phone. This is not a great demand on your time, but service on the board is very important to the continued success of the Guild and our activities at the Fort.

As always, if you have questions, concerns, or suggestions we want to hear from you. Officers' contact information appears on the back page of every newsletter. See you at the annual meeting! ♦ — Ike

Ike Bay, Guild President

ABANA EVENTS

2006 Conference

Seattle, Washington

July 5-8, 2006

For information: 706-310-0323

www.abanaseattle2006.com

Iron in the Hat

At the 2006 Seattle Conference

Prizes include a Ron Kinyon Air Hammer

Tickets for \$1.00 must be purchased by end of June

For information: see Ike Bay

ABANA information

www.abana.org

FORT CALENDAR

First Fridays at the Fort:

Friday, June 2

Brigade Encampment

Saturday and Sunday, June 17 - 18

Flag Day

Wednesday, June 14

Archeological Field School

June 13 - August 5

Kids Digs

Saturday, July 1

Fourth of July Celebration

Tuesday, July 4

First Fridays at the Fort:

Friday, July 7

Kids Digs

Saturday, July 15

Editor's Note

WE REGRET that the Peter Ross Workshop at Meridian Forge in Eatonville, August 11-13, was incorrectly listed as a Guild-sponsored event in the last newsletter. Thanks to David Stearns, who caught the error. Now I know that at least one member reads this. Also, *please, please, please* let us know of any change in your e-mail address. E-mail changes much more often than snail. ♦

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